Product Data Sheet

Product Name: LY3324954
Cat. No.: GC79202

Chemical Properties

Cas. No.

Formula	$C_{238}H_{362}N_{50}O_{76}$	M.Wt	5139.71
Solubility	DMSO: 100 mg/mL (19.46 mM; Need ultrasonic)	Storage	Sealed storage, away from moisture
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure

Background

Product Data Sheet

LY3324954 is a long-acting, highly selective glucagon receptor (GCGR) agonist. LY3324954 stimulates cAMP production via the hepatic GCGR signaling pathway and induces acute blood glucose elevation, while promoting FGF21 expression in the liver and plasma. LY3324954 reduces body weight and abdominal fat mass, increases energy expenditure, and effectively improves lipid homeostasis, insulin sensitivity, and glucose intolerance. LY3324954 can be used in obesity-related research [1] [2] [3].

In Vivo, LY3324954 (10 nmol/kg; s.c.; on day 1 and day 4) stimulates transient glucose excursions and progressive insulin secretion in lean C57Bl/6J mice, with enhanced glucose tolerance observed after 7 days of biweekly dosing[1]. LY3324954 (10 nmol/kg; s.c.; single dose) stimulates acute blood glucose elevation via a mechanism dependent on hepatic glucagon receptor signaling in mice[1]. LY3324954 (1-300 nmol/kg; s.c.; every 72 hours; 14 days) induces dose-dependent body weight and fat mass loss in diet-induced obese mice, with improvements in liver and lipid homeostasis observed across all tested doses[1]. LY3324954 (24 nmol/kg; s.c.; every 72 hours; 15 days) induces body weight and fat mass loss in diet-induced obese mice via increased energy expenditure and enhanced lipid oxidation, without reducing total food intake[1].

In Vitro, LY3324954 (1×10-14 M - 1×10-6 M; 30 min) potently activates human GCGR-expressing HEK293 cells with an EC50 of 5.472×10-10 M, demonstrating greater potency than native glucagon[1]. LY3324954 stimulates glucose output from human iPSC-derived hepatocytes to a comparable extent as native glucagon[1].

References:
[1]. Roell W, Coskun T, Kim T, et al.. Characterization of LY3324954 a long-acting glucagon-receptor agonist. Molecular metabolism. 2025 Jan;91:102073.
[2]. Bailey CJ, Flatt PR, Conlon JM. Multifunctional incretin peptides in therapies for type 2 diabetes, obesity and associated co-morbidities. Peptides. 2025 May;187:171380.
[3]. Suga T, Tabei Y, Kikuchi O, et al.. Sodium-glucose cotransporter-specific substrate αMG stimulates endogenous glucagon secretion and ameliorates obesity-associated metabolic disorders in mice. Molecular metabolism. 2026 Mar;105:102324.